The Effects of Various Comfort Food on Heart Coherence in Adults

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Background: Some of the nutrients in food are precursors to neurotransmitters, accounting for its effects on mood. Heart coherence (HC), which relates to the optimal psycho-physiological conditions for human body functions, is affected by a person's emotional status.

Objectives: (1) To determine the effects of various comfort food on HC and heart rate (HR) in adult females 20 to 50 years of age and (2) to evaluate if body mass index (BMI) has an effect on HC and HR when eating various comfort foods.

Methods: The researcher obtained consent from participants after explaining the project. The subjects' height and weight were measured using standardized methods to calculate their BMI. Participants sat in a comfortable chair in a quiet area with a clipped earpiece to measure their heart rate variability (HRV), HR, and HC. Each participant was asked about their favorite comfort food (sweet vs salty). First, the participant imagined eating her favorite comfort food (IFCF) and then was asked to imagine her non-favorite comfort food (INFCF). Finally, the participant ate her favorite comfort food (EFCF) and then ate her non-favorite comfort food (ENFCF). HC scores were recorded in three categories (low, medium, and high) in these four settings.

Results: A total of 20 participants completed the study. Paired student's *t*-tests were used to assess whether the means of the compared groups were statistically different. The data demonstrated that there was a higher HC when participants ate their favorite comfort food than when they ate the non-favorite comfort food (t=–2.912, P<.01) and a higher HC when eating a favorite comfort food than when imaging eating a favorite comfort food (t=–.2408, P<.01). The participants' BMI had a positive correlation between the BMI and low HC (when one increases, the other increases as well) when imagining eating a favorite comfort food (r =.475, P<.05). There was a negative correlation between BMI and medium HC (when one increases, the other decreases) when imagining eating a favorite comfort food (r = –.45, P<.05).

Conclusion: Female subjects with higher BMI (overweight and obese categories) have a higher HC when eating a favorite comfort food in comparison to imagining eating favorite comfort food. Adult females who are overweight or obese need to displace their pleasures of eating with other activities that can give them a higher state of coherence to avoid excessive eating of their favorite comfort food and to prevent weight gain.

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Citation
Global Adv Health Med. 2014;3(Suppl 1):BPA16.
DOI: 10.7453/gahmj.2014.BPA16

Key Words
Nutrition, biofeedback, obesity, HeartMath